

PATENT  
8022-1080

## IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of

Morio TAKAHASHI

Application No. 10/516,821

Filed December 7, 2004

THERMO-OPTIC PHASE SHIFTER AND  
MANUFACTURING METHOD OF THE SAMEINFORMATION DISCLOSURE STATEMENT

MS AMENDMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

March 7, 2005

Sir:

In compliance with Rules 1.97 and 1.98, and in fulfillment of the duty of disclosure under Rule 1.56, the accompanying documents, copies of which are attached to this statement, are made of record on the enclosed sheet.

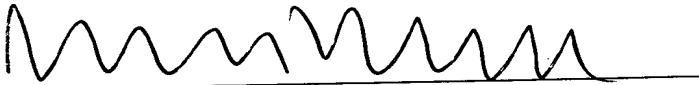
As the USPTO has waived the requirement under 37 CFR 1.98(a)(2)(i) for submitting a copy of each cited U.S. patent and patent publication for applications filed after June 30, 2003, a copy of the cited U.S. reference is not enclosed, as the present application is filed after June 30, 2003. Copies of the cited foreign patent documents and/or non-patent literature are enclosed.

A concise explanation of the relevance of these items is that these references were discovered during any searches they or their client had made, or that they were considered in the preparation of the application.

A concise description of the relevance of those references not in the English language is given on the introductory pages of the present specification.

Respectfully submitted,

YOUNG & THOMPSON



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RJP/fb

Enclosures:  Form PTO-1449(s)  
 Documents  
 Foreign Search Report  
 Other: \_\_\_\_\_



<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  (Use several sheets if necessary)	Attorney Docket No.: <b>8022-1080</b> <i>PENT &amp; TRADEMARK OFFICE</i>	Application No.: <b>10/516,821</b>
Applicant: <b>Morio TAKAHASHI</b>		
Filing Date: <b>December 7, 2004</b>		Group Art Unit: <b></b>

## **U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	2001-255474	9/21/2001	JAPAN				X
	2001-222034	8/17/2001	JAPAN				X
	3204493	10/19/1999	JAPAN				X
	11-201984	7/30/1999	JAPAN				X
	3152182	4/23/1999	JAPAN				X
	2848144	5/21/1997	JAPAN				X
	9-5653	1/10/1997	JAPAN				X
	6-148536	5/27/1994	JAPAN				X
	5-34525	2/12/1993	JAPAN				X

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)**

		Y. Hashizume et al., "Polymer-assisted silica-based thermo-optic switch", NTT Photonics Laboratories, NTT Corporation, Electron. Lett., 33, pp 194501946, 1997 (2001)
		Y. Hashizume et al., "PLC-type Variable Optical Attenuator with low polarization dependent loss", NTT Photonics Laboratories, PTL, Vol. 4, No. 1, pp. 36-38, Jan. 1992
		Y. Hida et al., "Polymer Waveguide Thermooptic Switch with Low Electric Power Consumption at 1.3 $\mu$ m, IEEE Photonics Technology Letters, Vo. 5, No. 7, July 1993
		M. Horino et al., "Development of Prototype Micromechanical Optical Switch", JSME International Journal, Series C, Vol. 41, No. 4, 1998
		T. Kanie et al., "PLC 2x2", Sumitomo Electric Industries, Ltd., J. Microelectromechanical System, Vol. 6, pp. 277-285, 1997
		Q. Lai et al., "Low-Power Compact 2 X 2 Thermooptic Silica-on-Silicon Waveguide Switch with Fast Response", IEEE Photonics Technology Letters, Vol. 10, No. 5, May 1998
		S. Shoma et al., "Low switching powers silica-based 1.5% delta thermooptic switch with heat insulating trenches", NTT Photonics Laboratories, 2002

**EXAMINER:**

**DATE CONSIDERED**

A circular black and white stamp. The outer ring contains the text "U.S. PATENT & TRADEMARK OFFICE" at the top and "SEARCHED, SERIALIZED" at the bottom. The center of the circle contains the date "MARCH 10 2005".

# **INFORMATION DISCLOSURE CITATION IN AN APPLICATION**

(Use several sheets if necessary)

Attorney Docket No.:  
**8022-1080**

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**10/516,821**

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## **U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

A. Sugita et al., "Bridge-Suspended Silica-Waveguide Thermo-Optic Phase Shifter and Its Application to Mach-Zehnder Type Optical Switch", The Transactions of the IEICE, Vol. E 73, No. 1, January 1990

**EXAMINER:**

**DATE CONSIDERED**

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

\* Abstract provided for the Examiner's convenience